PROTECTED PLANT PRESERVATION PLAN

CITY OF ADELANTO, SAN BERNARDINO COUNTY, CALIFORNIA APN: 3128-421-01 and 05

Prepared for:

United Engineering Group 8885 Haven Avenue, Suite 195 Rancho Cucamonga, CA 91730

Prepared by:

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Principal Investigators:

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TITLE PAGE

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Report Title: Protected Plant Preservation Plan

Project Location: Adelanto, California

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1.0 SUMMARY

At the request of the project proponent, RCA Associates, Inc. surveyed an approximately 40-acre property located on the north-east corner of Aster Road and Cactus Road in the city of Adelanto, California (Township 5 North, Range 5 West, Section 8, USGS Adelanto, California Quadrangle, 1956) (Figures 1, 2, and 3). In addition, an approximate 0.6-acres area was surveyed just west of the northwest corner of the site.

The purpose of the survey was to evaluate the Joshua trees present on the site and determine which trees were suitable for relocation and which trees could be discarded prior to project area clearing activities. This report provides the results of the Joshua tree survey performed on January 13, 2022. Additionally, a second survey was completed on July 19, 2022 to survey a ~28,000 sq. ft. section off site near the northwest corner of the project which will be included in the final plan as a drainage area. Following completion of the survey, RCA Associates, Inc. prepared this Protected Plant Preservation Plan to assist the project proponent with future relocation of the Joshua trees. Information on the Joshua trees which will need to be relocated-transplanted in the future is provided in Section 4.0. The City of Adelanto Municipal Code has a chapter (Chapter 17.57.040) stating the purpose of Joshua Tree preservation and the consequence of removing one, and follows the County of San Bernardino Plant Protection Plan and Management (Chapter 88.01.060) to help protect and preserve desert vegetation, including Joshua trees. The requirements of the Ordinance (Chapter 88.01.060) are provided in Appendix B.

Based on the results of the field investigations there are 158 Joshua trees which occur within the boundaries of the property (Figures 1, 2, and 3). Based on the evaluation and analysis of each tree it was determined that 83 of the 158 Joshua trees (52.5%) are suitable for transplanting. These trees are marked in red in Table 4-1. The remaining 75 Joshua trees (47.5%) were determined to be unsuitable for transplanting due to a variety of factors such as size, condition, damage, dying, dead, excessive leaning, possibly disease, clonal, etc.

2.0 INTRODUCTION AND PROJECT LOCATION

The area surveyed is located at the north-east corner of Aster Road and Cactus Road in Adelanto, California (Figures 1 and 2). An area offsite located just west of the northwest corner of the project site was also surveyed and is designated as an offsite drainage area. Current conditions on the property include a moderately disturbed desert scrub community with moderate signs of human disturbances. The biological resources on the site consist of a desert scrub community typical of the area with creosote bush (*Larrea tridentata*), rubber rabbitbrush (*Ericameria nauseosa*), white-bursage (*Ambrosia dumosa*), flatspine bur ragweed (*Ambrosia acanthicarpa*), Joshua trees (*Yucca brevifolia*), kelch grass (*Schismus barbatus*), and cheatgrass (*Bromus tectorum*) observed on the site. Vacant land borders the property in all directions (Figure 2).

Joshua trees occur throughout the Mojave Desert in Southern California and are typically found at an elevation of 400 to 1,800 meters (~1,200 to ~5,400 feet). Joshua trees within the western portion of the Mojave Desert typically receive more annual precipitation during "normal" years; consequently, cloning occurs more often resulting in numerous trunks sprouting from the same root system (Rowland, 1978). Joshua tree habitats provide habitat for a variety of wildlife species including desert woodrats (*Neotoma* sp.) and night lizards (*Xantusia* sp.) both of which utilize the base of the trees. A variety of birds also utilize Joshua trees for nesting such as hawks, common ravens, and cactus wrens. CDFW consider Joshua tree woodlands as areas that support relatively high species diversity and as such are considered to be a sensitive desert community. Joshua trees are also considered a significant resource under the California Environmental Quality Act (CEQA) and are included in the Desert Plant Protection Act, Food and Agricultural Code (80001 – 80006).

3.0 METHODOLOGIES

Pedestrian surveys were walked throughout the site and biologists from RCA Associates, Inc. evaluated each Joshua tree to determine which trees were suitable for relocation/transplanting based on a general health assessment. Each Joshua tree received a metal numbered tag which was affixed on the north side of each tree for orientation purposes during future transplanting. Surveyor flagging was also placed around those trees suitable for transplanting to facilitate future identification. The precise location of each tree was recorded using a Garmin inReach Explorer+ GPS unit and a Nikon Forestry Pro II rangefinder was utilized to determine the extent of the property boundaries and accurate tree height. Those Joshua trees which occur on the property site are presented in Table 4-1 and the locations are provided in Figure 2.

In addition, a buffer extending out from the project boundary was surveyed visually out to 300-feet. Trees located within a 66-foot buffer from the project boundary were marked with coordinates and given designation of either mature (Adult) or not. Joshua trees that occur beyond the 66-foot buffer, and up to the 300-foot buffer were also marked, but given no distinction of life stage. There was a total of 36 Joshua trees observed outside of the project boundary and within the buffer zones (Figure 4).

The factors utilized to determine which Joshua trees were suitable for transplanting include the following factors:

- 1. Trees from about 1 foot in height up to approximately 12 feet,
- 2. No visible signs of damage to the tree such as absence of bark due to rodent or other animals,
- 3. Minimal number of branches (No more than 2 or 3 branches),
- 4. No excessive leaning of the tree,
- 5. No yellow or brown fronds,
- 6. Proximity to other Joshua trees (i.e., clonal), and
- 7. No exposed roots at the base of the tree.
- 8. Dying or dead

4.0 RESULTS

There are 158 Joshua trees on the property and the GPS locations of the Joshua trees are provided in Table 4-1. A total of 83 Joshua trees (52.5%) are suitable for relocation/transplanting based on the nine factors listed in Section 3.0 (Table 4-1). The Joshua trees suitable for transplanting should be relocated/transplanted on-site, which is the preferable option, or to an off-site area approved by the City of Adelanto. Those Joshua trees that are not suitable for relocation/transplanting due to size, health of the tree, presence of damage, excessive branches, excessive leaning, clonal, and exposed roots should be disposed of as per City requirements. There was a total of 36 Joshua trees located outside of the project boundary that fall within the 66-foot and 300-foot buffers which will be used to assess impacts to the species as a whole.

Table 4-1: Joshua tree census. (Note: The GPS locations of the Joshua trees are provided below and those trees which are suitable for transplanting on-site as part of project landscaping are highlighted in green.)

Total Number of	Joshua Trees to be	Number of Clonal	Number of Non-	Number of Dead
Joshua Trees On Site	Transplanted	Trees	Clonal Trees	Trees
158	83	12	146	28

Tag	Life						Health	Health	Number	
#	Stage	Height	Location	Panicles	Branches	Condition	Assessment	Assessment	of Trunks	Transplantable
7201	Adult		N34.536341° W117.434277°			Dead	Laying on Ground			No
7202	Juvenile	4	N34.536607° W117.434402°			Good				Yes
7203	Adult	22	N34.53673° W117.433961°	10	32	Good	Height		3	No
7204	Juvenile	4	N34.536746° W117.434258°			Good				Yes
7205	Adult		N34.536819° W117.434425°			Dead	Laying on Ground			No
7206	Juvenile	3	N34.536844° W117.434376°			Good				Yes
7207	Adult	17	N34.536819° W117.434645°	8	6	Good	Height			No
7208	Juvenile	4	N34.53705° W117.434014°			Good				Yes
7209	Juvenile	5	N34.537181° W117.433937°			Good				Yes
7210	Juvenile	5	N34.537046° W117.433811°			Good				Yes
7211	Juvenile	5	N34.537285° W117.433799°			Good				Yes
7212	Juvenile	3	N34.537289° W117.433896°			Good	Leaning			Yes

Tag #	Life Stage	Height	Location	Panicles	Branches	Condition	Health Assessment	Health Assessment	Number of Trunks	Transplantable
7213	Adult	13	N34.537402° W117.433993°	2	7	Good	Height	Light Damage	4	No
7214	Juvenile	3	N34.537219° W117.434244°			Good				Yes
7215	Juvenile	3	N34.537312° W117.434325°			Good				Yes
7216	Adult		N34.537392° W117.434238°			Dead	Laying on Ground			No
7217	Adult		N34.537536° W117.434264°			Dead	Laying on Ground			No
7218	Juvenile	2	N34.537635° W117.434213°			Good				Yes
7219	Adult		N34.537694° W117.434308°			Dead	Laying on Ground			No
7220	Adult	19	N34.537653° W117.434403°	5	40	Good	Light Damage			No
7221	Juvenile	4	N34.537978° W117.434378°			Good				Yes
7222	Juvenile	11	N34.538081° W117.43384°			Good				Yes
7223	Juvenile	4	N34.538717° W117.434013°			Good				Yes
7224	Adult	24	N34.539117° W117.433814°	3	22	Good	Height			No
7225	Adult	17	N34.539327° W117.433594°		8	Good	Height			No
7226	Juvenile	3	N34.539197° W117.4334°			Good				Yes
7227	Adult	15	N34.539084° W117.433104°		2	Good	Height			Yes
7228	Juvenile	5	N34.538909° W117.433207°			Good				Yes
7229	Juvenile	10	N34.538825° W117.433232°			Good				Yes
7230	Juvenile	4	N34.538802° W117.433344°			Good				Yes

	Tag	Life	Uniah+	Location	Panicles	Branches	Condition	Health Assessment	Health	Number of Trunks	Transplantable
	#	Stage	Height		Pariicies	branches	Condition	Assessment	Assessment	OI ITUIKS	Transplantable
Nat. Salati	7231	Juvenile	3				Good				Yes
Test											
N34.538271	7232	luvenile	3				Good				Yes
Table Tabl		Javenne									
Table Tabl	7222	luvanila	5	N34.538271°			Good				Voc
Adult	7233	Juvernie	3	W117.433182°			doou				163
N34.537838° Dead Caround No	7224	4 ماریا∔		N34.537907°			Dood	Laying on			No
No	7254	Auuit		W117.433372°			Deau	Ground			INO
Table Tabl	7225	A .l .lı		N34.537838°			D I	Laying on			NI.
No	/235	Adult		W117.433218°			Dead				NO
No				N34.537832°							
7237 Adult N34.53761° W117.43351° Dead Laying on Ground No 7238 Juvenile 2 N34.537557° W117.43322° Good Yes 7239 Juvenile 11 N34.537536° W117.433157° Good Yes 7240 Adult 13 N34.53642° M17.433409° 3 Good Height No 7241 Adult 17 N34.536359° M17.433459° 4 Good Height No 7242 Juvenile 2 N34.536337° M17.433479° Good No 7243 Juvenile 2 N34.53609° Good Yes 7244 Adult N34.536104° M17.433478° Dead Laying on Ground No 7245 Juvenile 3 N34.536104° M17.432648° Good Yes 7246 Juvenile 3 N34.536385° M17.433088° Good Yes 7247 Adult 18 N34.536385° M17.4332471° 22 Poor Heavy Damage Browning No	7236	Juvenile	1				Good				No
Total Materials Material								Laving on			
7238 Juvenile 2 N34.537557* W117.43322* Good Yes 7239 Juvenile 11 N34.537536* W117.433157* Good Yes 7240 Adult 13 N34.53642* W117.433409* 3 Good Height No 7241 Adult 17 N34.536359* W117.433459* 4 Good Height No 7242 Juvenile 2 N34.53639* W117.433459* Good No 7243 Juvenile 2 N34.53609* W117.433478* Good Yes 7244 Adult N34.536104* W117.432979* Dead Laying on Ground No 7245 Juvenile 3 N34.536385* W117.433088* Good Yes 7246 Juvenile 3 N34.536385* W117.433088* Good Yes 7247 Adult 18 N34.536294* W117.432471* 22 Poor Heavy Damage Browning No 7248 Juvenile 3 N34.535999* Ood No No <td>7237</td> <td>Adult</td> <td></td> <td></td> <td></td> <td></td> <td>Dead</td> <td></td> <td></td> <td></td> <td>No</td>	7237	Adult					Dead				No
Total Process Total Proces								Croaria			_
7239 Juvenile 11 N34.537536° W117.433157° Good Yes 7240 Adult 13 N34.53642° W117.433409° 3 Good Height No 7241 Adult 17 N34.536359° W117.433459° 4 Good Height No 7242 Juvenile 2 N34.536337° W117.433679° Good No 7243 Juvenile 2 N34.536069° W117.433478° Good Yes 7244 Adult N34.536104° W117.432478° Dead Laying on Ground No 7245 Juvenile 3 N34.536164° W117.432648° Good Yes 7246 Juvenile 3 N34.536294° W117.433088° Good Yes 7247 Adult 18 N34.536294° W117.432471° 22 Poor Heavy Damage Browning No 7248 Juvenile 3 N34.535999° Good Yes	7238	Juvenile	2				Good				Yes
Total Property Tota											
7240 Adult 13 N34.53642° W117.433409° 3 Good Height No 7241 Adult 17 N34.536359° W117.433659° 4 Good Height No 7242 Juvenile 2 N34.536337° W117.433679° Good No 7243 Juvenile 2 N34.536069° W117.433478° Good Yes 7244 Adult N34.536104° W117.432478° Dead Laying on Ground No 7245 Juvenile 3 N34.536164° W117.432648° Good Yes 7246 Juvenile 3 N34.536385° W117.432648° Good Yes 7247 Adult 18 N34.536294° W117.432471° 22 Poor Heavy Damage Browning No 7248 Juvenile 3 N34.535909° Good Yes	7239	Juvenile	11				Good				Yes
7240 Adult 13 W117.433409° 3 Good Height No 7241 Adult 17 N34.536359° W117.433459° 4 Good Height No 7242 Juvenile 2 N34.536337° W117.433679° Good No 7243 Juvenile 2 N34.536609° W117.433478° Good Laying on 											
T241 Adult 17	7240	Adult	13			3	Good	Height			No
7241 Adult 17 W117.433459° 4 Good Height No 7242 Juvenile 2 N34.536337° W117.433679° Good No 7243 Juvenile 2 N34.536069° W117.433478° Good Yes 7244 Adult N34.536104° W117.432979° Dead Laying on Ground No 7245 Juvenile 3 N34.536164° W117.432648° Good Yes 7246 Juvenile 3 N34.536385° W117.433088° Good Yes 7247 Adult 18 N34.536294° W117.432471° 22 Poor Heavy Damage Browning No 7248 Juvenile 3 N34.535909° Good Yes											
Total Process Total Proces	7241	Adult	17			4	Good	Height			No
Total Properties Total Prope											
Total Property Tota	7242	Juvenile	2				Good				No
7243 Juvenile 2 W117.433478° Good Yes 7244 Adult N34.536104° W117.432979° Dead Laying on Ground No 7245 Juvenile 3 N34.536164° W117.432648° Good Yes 7246 Juvenile 3 N34.536385° W117.433088° Good Yes 7247 Adult 18 N34.536294° W117.432471° 22 Poor Heavy Damage Browning No 7248 Juvenile 3 N34.535909° Good Yes											
T244 Adult N34.536104° Dead Laying on Ground No	7243	luvenile	2				Good				Yes
7244 Adult W117.432979° Dead Ground No 7245 Juvenile 3 N34.536164° W117.432648° Good Yes 7246 Juvenile 3 N34.536385° W117.433088° Good Yes 7247 Adult 18 N34.536294° W117.432471° 22 Poor Heavy Damage Browning No 7248 Juvenile 3 N34.535909° Good Yes	7213	Javenne									163
W117.432979° Ground 7245 Juvenile 3 N34.536164° W117.432648° Good Yes 7246 Juvenile 3 N34.536385° W117.433088° Good Yes 7247 Adult 18 N34.536294° W117.432471° 22 Poor Heavy Damage Browning No 7248 Juvenile 3 N34.535909° Good Yes	7244	۸dult		N34.536104°			Dead	Laying on			No
7245 Juvenile 3 W117.432648° Good Yes 7246 Juvenile 3 N34.536385° W117.433088° Good Yes 7247 Adult 18 N34.536294° W117.432471° 22 Poor Heavy Damage Browning No 7248 Juvenile 3 N34.535909° Good Yes	7244	Addit		W117.432979°			Dead	Ground			110
W117.432648° 7246 Juvenile 3 N34.536385° W117.433088° Good Yes 7247 Adult 18 N34.536294° W117.432471° 22 Poor Heavy Damage Browning No 7248 Juvenile 3 N34.535909° Good Yes	7245	luvonilo	2	N34.536164°			Cood				Voc
7246 Juvenile 3 W117.433088° Good Yes 7247 Adult 18 N34.536294° W117.432471° 22 Poor Heavy Damage Browning No 7248 Juvenile 3 N34.535909° Good Yes	7245	Juvernie	3	W117.432648°			Good				res
7247 Adult 18 N34.536294°	7246	1	2	N34.536385°			Const				V
7247 Adult 18 W117.432471° 22 Poor Heavy Damage Browning No 7248 Juvenile 3 N34.535909° Good	/246	Juvenile	3	W117.433088°			Good				Yes
7247 Adult 18 W117.432471° 22 Poor Heavy Damage Browning No 7248 Juvenile 3 N34.535909° Good			4.5			0-	_				
7248 Juvenile 3 N34.535909° Good Ves	/247	Adult	18			22	Poor	Heavy Damage	Browning		No
77/18 Livenile 3 Vec											
	7248	Juvenile	3				Good				Yes

Tag	Life	llaiah.	Landina	Danieles	Duonahaa	Condition	Health	Health	Number	Tuananlantabla
#	Stage	Height	Location	Panicles	Branches	Condition	Assessment	Assessment	of Trunks	Transplantable
7249	Juvenile	3	N34.53644°			Good				Yes
	Javenne		W117.432483°							163
7250	Adult	23	N34.536639°			Fair	Height	Browning		No
7230	Addit	23	W117.43247°			ran	rieigiit	browning		
7251	Adult		N34.536733°			Dead	Laying on			No
7231	Adult		W117.432578°			Deau	Ground			INO
7252	limanila	2	N34.537053°			Cood				Voc
7252	Juvenile	2	W117.432624°			Good				Yes
7252	A.I. II	0	N34.537249°	4		D I				V
7253	Adult	8	W117.432829°	1		Dead				Yes
		_	N34.537289°							.,
7254	Juvenile	2	W117.432989°			Good				Yes
			N34.537325°				Laying on			
7255	Adult		W117.432731°			Dead	Ground			No
			N34.537364°							
7256	Adult	16	W117.432495°		3	Good	Height	Leaning		No
(<u> </u>			N34.537395°							
7257	Juvenile	9	W117.432444°			Good				Yes
-			N34.537209°							
7258	Juvenile	3	W117.432286°			Good				Yes
			N34.537401°							
7259	Juvenile	4	W117.432171°			Good				Yes
			N34.5374°							
7260	Juvenile	1	W117.43215°			Good				No
-			N34.537464°							
7261	Juvenile	4	W117.432326°			Good				Yes
			N34.537571°							
7262	Juvenile	2	W117.432411°			Good				Yes
-										
7263	Juvenile	2	N34.537525°			Good				Yes
			W117.432492°							
7264	Juvenile	3	N34.53786°			Good				Yes
			W117.433011°							
7265	Adult		N34.538066°			Dead	Laying on			No
			W117.432881°				Ground			_
7266	Juvenile	2	N34.538048°			Good				Yes
			W117.432862°							

Tag	Life	lla:abt	Location	Danielae	Duomahaa	Condition	Health	Health	Number	Transulantable
#	Stage	Height	Location	Panicles	Branches	Condition	Assessment	Assessment	of Trunks	Transplantable
7267	Adult	24	N34.538159° W117.432869°	3	13	Good	Leaning			No
7268	Adult		N34.538252° W117.433032°			Dead	Laying on Ground			No
7269	Juvenile	5	N34.538405° W117.432814°			Good			2	No
7270	Juvenile	5	N34.538629° W117.432839°			Good				Yes
7271	Juvenile	5	N34.538883° W117.43284°			Good				Yes
7272	Juvenile	2	N34.538893° W117.432863°			Good				Yes
7273	Adult		N34.53902° W117.432928°			Dead	Laying on Ground			No
7274	Juvenile	3	N34.53907° W117.432815°			Good			2	No
7275	Adult	10	N34.53906° W117.432803°		5	Good	Height			No
7276	Adult	18	N34.538999° W117.432562°	2	6	Good				No
7277	Juvenile	11	N34.538782° W117.432521°			Good				Yes
7278	Juvenile	4	N34.538774° W117.432499°			Good				Yes
7279	Adult	18	N34.53882° W117.432328°	4	13	Good	Height			No
7280	Juvenile	3	N34.538766° W117.432201°			Good				Yes
7281	Juvenile	4	N34.538811° W117.432124°			Good				Yes
7282	Juvenile	2	N34.539214° W117.432258°			Good				No
7283	Juvenile	4	N34.538324° W117.431928°			Good			2	No
7284	Juvenile	4	N34.538287° W117.432094°			Good			2	No

Tag	Life						Health	Health	Number	
#	Stage	Height	Location	Panicles	Branches	Condition	Assessment	Assessment	of Trunks	Transplantable
7285	Juvenile	3	N34.538262°			Good				Yes
			W117.432163°							
7286	Adult	18	N34.538279°	6	16	Good	Leaning	Height		No
			W117.432251°							
7287	Juvenile	4	N34.538133°			Good				Yes
			W117.432269°							
7288	Juvenile	3	N34.538139°			Good				Yes
			W117.432399°							
7289	Adult		N34.537948°			Dead	Laying on			No
			W117.432638°				Ground			
7290	Adult	28	N34.537876°	10	38	Fair	Light Damage	Height		No
	710010		W117.432625°				2.6.11 24111480			
7291	Juvenile	3	N34.537971°			Good				Yes
	Javenne		W117.432385°							
7292	Juvenile	2	N34.537908°			Good				Yes
	Javenne		W117.432232°							165
7293	Juvenile	3	N34.538098°			Good				Yes
7233	Javenne		W117.431953°							165
7294	Adult	16	N34.537946°	4	10	Good	Height			No
	Addit	10	W117.431816°				Ticigitt			
7295	Juvenile	3	N34.537909°			Good			2	No
	Javenne		W117.431825°						۷	
7296	Juvenile	2	N34.537762°			Good				Yes
7230	Juvernie	2	W117.431704°							163
7297	Juvenile	4	N34.537709°			Good			2	No
	Juvernie	7	W117.432013°							
7298	Juvenile	5	N34.537644°			Good				Yes
7236	Juvernie	J	W117.432162°							163
7299	Adult		N34.537531°			Dead	Laying on			No
1233	Addit		W117.431818°			Dead	Ground			INO
7300	Juvenile	5	N34.537482°			Good				Yes
7300	Juverille	3	W117.431876°			Good				163
7301	Adult	11	N34.537369°		2	Good				Yes
/301	Addit	11	W117.431707°							162
7302	Juvenile	2	N34.537303°			Good				Yes
/302	Juverille	2	W117.431698°			Good				162

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Table Tabl	Tag	Life						Health	Health	Number	
Table Tabl	#	Stage	Height	Location	Panicles	Branches	Condition	Assessment	Assessment	of Trunks	Transplantable
Nat.	7303	Adult	6			2	Good				Yes
Table Tabl		Addit									103
No	7304	luvenile	3				Good				Ves
No No No No No No No No	7304	Javenne		W117.43198°							
Nation	7305	luvanila		N34.537179°			Dead				No
No	7303	Juvernie		W117.432039°			Dead				
No	7206	luvanila	5	N34.537208°			Good				No
7307 Adult 18	7300	Juvernie	J	W117.432049°			dood				INO
N34.53661° 1 2 Good Yes	7207	۸ طبیا+	10	N34.536943°	2	0	Cood	Hoight	Loaning		No
Table Tabl	/30/	Adult	10	W117.432034°	2	٥	Good	пеідііі	Leaning		INO
Table Tabl	7200	على الم ٨	7	N34.53661°	1	2	Cood				Vee
Total Tota	/308	Adult	/	W117.431914°	1	2	Good				Yes
Nat.	7200	li i i i a a fila	2	N34.536492°			Canal				Vaa
No No No No No No No No	7309	Juvenile	2	W117.431989°			Good				Yes
Nation N	7240	على الم		N34.536087°			Dand				NI-
Table Tabl	/310	Adult		W117.431887°			Dead				NO
No	7244	1	2	N34.536148°			Caral				W
7312 Adult 18 N34.536266° W117.431509° 3 Good Height No 7313 Adult 30 N34.53645° W117.431346° 6 14 Fair Light Damage No 7314 Juvenile 3 N34.53636° W117.431113° Good Yes 7315 Juvenile 7 N34.536214° W117.430881° Good Yes 7316 Adult 10 N34.536263° W117.430871° 3 Poor Browning Heavy Damage No 7317 Juvenile 4 N34.5366385° W117.430995° Good Yes 7318 Adult 13 N34.536665° W117.431084° 2 Good Height 2 No 7319 Juvenile 2 N34.536665° W117.430916° Good Yes	/311	Juvenile	3	W117.43154°			Good				Yes
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7314 Juvenile 3 W117.431113° Good Yes 7315 Juvenile 7 N34.536214° W117.430881° Good Yes 7316 Adult 10 N34.536263° W117.430871° 3 Poor Browning Heavy Damage No 7317 Juvenile 4 N34.536385° W117.430995° Good Yes 7318 Adult 13 N34.536612° W117.431084° 2 Good Height 2 No 7319 Juvenile 2 N34.536665° W117.430916° Good Yes 7320 Juvenile 3 N34.536846° Good Yes											
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7315 Juvenile 7 W117.430881° Good Yes 7316 Adult 10 N34.536263° W117.430871° 3 Poor Browning Heavy Damage No 7317 Juvenile 4 N34.536385° W117.430995° Good Yes 7318 Adult 13 N34.536612° W117.431084° 2 Good Height 2 No 7319 Juvenile 2 N34.536665° W117.430916° Good Yes	-										
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7316 Adult 10 W117.430871° 3 Poor Browning Heavy Damage No 7317 Juvenile 4 N34.536385° W117.430995° Good Yes 7318 Adult 13 N34.536612° W117.431084° 2 Good Height 2 No 7319 Juvenile 2 N34.536665° W117.430916° Good Yes 7320 Juvenile 3 N34.536846° Good Yes											
7317 Juvenile 4 N34.536385° W117.430995° Good Yes 7318 Adult 13 N34.536612° W117.431084° 2 Good Height 2 No 7319 Juvenile 2 N34.536665° W117.430916° Good Yes 7320 Juvenile 3 N34.536846° Good Yes	7316	Adult	10			3	Poor	Browning	Heavy Damage		No
7317 Juvenile 4 W117.430995° 7318 Adult 13 N34.536612° W117.431084° 7319 Juvenile 2 N34.536665° W117.430916° 7320 Juvenile 3 N34.536846° Residue 4 W117.430995° Good Height 2 No Yes											
7318 Adult 13 N34.536612° 2 Good Height 2 No 7319 Juvenile 2 N34.536665° W117.430916° Good Yes 7320 Juvenile 3 N34.536846° Good Yes	7317	Juvenile	4				Good				Yes
7318 Adult 13 W117.431084° 2 Good Height 2 No 7319 Juvenile 2 N34.536665° Good Yes 7320 Juvenile 3 N34.536846° Good Yes											
7319 Juvenile 2 N34.536665° W117.430916° N34.536846° N34.536846° Yes	7318	Adult	13			2	Good	Height		2	No
7319 Juvenile 2 W117.430916° Good Yes 7320 Juvenile 2 N34.536846° Good Yes											
7320 Juvenile 2 N34.536846° Yes	7319	Juvenile	2				Good				Yes
7370 IUVANIA 7											
***************************************	7320	Juvenile	2	W117.431222°			Good				Yes

RCA ASSOCIATES, INC. 11 JULY 2022

Tag	Life						Health	Health	Number	
#	Stage	Height	Location	Panicles	Branches	Condition	Assessment	Assessment	of Trunks	Transplantable
7321	Juvenile	5	N34.536795°			Good			3	No
	Javenne		W117.431325°							
7322	Juvenile	5	N34.536992°			Good				Yes
			W117.431159°							
7323	Adult	26	N34.537158°	10	40	Good	Light Damage			No
			W117.431477°							
7324	Adult	13	N34.53742°	1	4	Good	Light Damage			No
			W117.431291°	-						
7325	Adult	21	N34.537374°	4	6	Good	Height			No
			W117.431072°							
7326	Adult	20	N34.537715°		4	Good	Height			No
			W117.430801°							
7327	Adult		N34.53778°			Dead	Laying on			No
			W117.431138°				Ground			
7328	Juvenile	3	N34.537847°			Good				No
			W117.431012°							
7329	Adult		N34.537951°			Dead	Laying on			No
			W117.431437°				Ground			
7330	Juvenile	10	N34.538162°			Good				Yes
			W117.431134°							
7331	Adult		N34.53834°			Dead	Laying on			No
	, , , , , ,		W117.430901°				Ground			
7332	Juvenile	6	N34.538551°			Good				Yes
			W117.431254°							
7333	Juvenile	2	N34.538571°			Good				Yes
			W117.431556°							
7334	Juvenile	9	N34.538632°			Good				Yes
			W117.431574°							
7335	Adult	23	N34.538734°	3	23	Poor	Heavy Damage	Browning		No
	, , , , , ,		W117.431527°					2101111116		
7336	Juvenile	10	N34.538635°			Good				Yes
	Javenne		W117.431142°							
7337	Adult	27	N34.538649°	6	15	Poor	Heavy Damage		2	No
		- ,	W117.43077°			. 30.				
7338	Adult	16	N34.538931°	2	7	Fair	Light Damage			No
			W117.431049°	<u>-</u>		. 3	0			

Tag #	Life Stage	Height	Location	Panicles	Branches	Condition	Health Assessment	Health Assessment	Number of Trunks	Transplantable
7339	Adult	13	N34.539184° W117.431389°	T difficies	4	Good	Height	Assessment	OI II diiks	No
7340	Juvenile	3	N34.539173° W117.431359°			Good				Yes
7341	Juvenile	4	N34.539257° W117.431345°			Good				Yes
7342	Juvenile	2	N34.539242° W117.431225°			Good				Yes
7343	Juvenile	11	N34.53918° W117.431227°			Good				Yes
7344	Adult		N34.539291° W117.430933°			Dead	Laying on Ground			No
7345	Adult		N34.539282° W117.430845°			Dead	Laying on Ground			No
7346	Juvenile	8	N34.539058° W117.430812°			Good				No
7347	Juvenile	12	N34.538933° W117.430442°			Good				Yes
7348	Juvenile	4	N34.538193° W117.430478°			Good				Yes
7349	Juvenile	2	N34.538104° W117.430557°			Good				Yes
7350	Adult		N34.537744° W117.43042° N34.537395°			Dead				No
7351	Adult		W117.430538° N34.53721°			Dead	Laying on			No
7352	Adult		W117.430382° N34.537074°			Dead	Ground			No
7353	Adult		W117.43068°			Dead	Laying on Ground			No
7354	Juvenile	3	N34.536729° W117.430552° N34.536272°			Good				Yes
7355	Adult	18	W117.430571°			Good	Height		4	No
7356	Juvenile	2	N34.536118° W117.430585°			Good				Yes

Results for additional survey completed on July 19, 2022 for offsite drainage area.

Tag	Life						Health	Health	Number	
#	Stage	Height	Location	Panicles	Branches	Condition	Assessment	Assessment	of Trunks	Transplantable
1267	Seedling	.5	N34.538986°, W117.435105°			Good	Less than 1 ft			No
1268	Adult	16	N34.538506°, W117.435139°	2	12	Good	Greater than 12 ft			Yes

5.0 CONCLUSIONS

There are 158 Joshua trees located on the property and 83 of the trees are suitable for relocation/transplanting. This conclusion was based on: (1) trees which were one foot or greater in height and less than twelve feet tall (approximate); (2) in good health; (3), two branches or less; (4) density of trees (i.e., no clonal trees); (5) no exposed roots; (6) and trees that are not leaning over excessively. As indicated in Table 4-1, the majority of the Joshua trees which were not suitable for relocation are dead and lying on the ground.

As of September 22, 2020, the California Department of Fish and Wildlife temporarily listed the western Joshua tree (*Yucca brevifolia*) as an endangered species until a final decision is made in 2022. Therefore, any attempt to remove the Joshua tree from its current position will require an Incidental Take Permit (ITP).

The City of Adelanto's Municipal Code (Chapter 17.57.040) instructs to follow the County of San Bernardino's ordinance (88.01.060), which requires preservation of Joshua trees given their importance in the desert community. A qualified City-approved biologist or arborist should be retained to conduct any future relocation/transplanting activities and should follow the protocol of the County's Municipal Code (Appendix B: Chapter 88.01.060). The following criteria will be utilized by the contractor when conducting any future transplanting activities.

- A. The Joshua trees will be retained in place or replanted somewhere on the site where they can remain in perpetuity or will be transplanted to an off-site area approved by the city where they can remain in perpetuity. Joshua trees which are deemed not suitable for transplanting will be cut-up and discarded as per City requirements.
- B. Earthen berms will be created around each tree by the biologist prior to excavation and the trees will be watered approximately one week before transplanting. Watering the trees prior to excavation will help make excavation easier, ensure the root ball will hold together, and minimize stress to the tree.
- C. Each tree will be moved to a pre-selected location which has already been excavated and will be placed and oriented in the same direction as their original direction.

The hole will be backfilled with native soil, and the transplanted tree will be immediately watered. As noted in Section 3.0, a numbered metal tag was placed on the north side of the trees and the trees were also flagged with surveyor's flagging. The biologist will develop a watering regimen to ensure the survival of the transplanted trees. The watering regimen will be based upon the needs of the trees and the local precipitation.

6.0 REFERENCES

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7.0 CERTIFICATION

I hereby certify the statements furnished above and in the attached exhibits, present the data and information required for this Joshua tree survey and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this survey was performed by Ryan Hunter, Jessica Hensley and Brian Bunyi.

Updated: July 22, 2022 Signed: Ryan Hunter

Jessica Hensley

Brian Bunyi

Field Work Performed by:

Ryan Hunter
Environmental Scientist/Biologist

Jessica Hensley
Environmental Scientist/Biologist

Brian Bunyi
Environmental Scientist/Biologist





